


## Constriction of Pancasila Student Profile Assessment for 21st Century Students in Elementary School


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**Abstract:** Student Profile Pancasila is a character that characterizes Indonesian students. For this reason, the character values of Pancasila students should be instilled in schools from an early age. The purpose of this study was to construct a Pancasila student character instrument for elementary school students. This study uses a quantitative approach with a sample of 697 grade 3 and grade 4 students in Soppeng district. Data analysis in this study uses validity and reliability. Content validity using Aiken's V for 40 items succeeded in reducing the instrument to 35 items with a validity index at 0.76 – 1. CFA analysis to prove content validity shows that the model is fit with 24 items. The reliability estimation shows that a 24-items instrument is reliable. Thus it can be concluded that the 24 items of the Pancasila Student Profile instrument in construction terms can be used to measure the character of 21st century students in Indonesia.

**Keywords:** character; pancasila student profile; validity; reliability

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### Introduction

To face the challenges of the 21st century, the study regarding character has become crucial among educational and psychological experts. Character has been a target of governments in various countries to create good, employable, sociable, and high moral global citizens (Taylor, 2018; Allen & Bull, 2018). The World Economic Forum (2015) identified three main skills that students must acquire in facing the 21st century challenges, called fundamental literacy, competencies, and character qualities. Furthermore, character qualities include curiosity, initiative, persistence, adaptability, leadership, and social and cultural awareness. Providing character education to students can improve social-emotional skills, and academic development (Lovat, 2017).

Various educational institutions uphold character education in achieving individual and societal welfare, although character education is termed differently such as life skills, character development, ethics education or values education (Jose, 2021). Character is a daily activity that can be observed (Wyne, 1991) and can be formed through the educational environment, especially character education. Character education as an educational institution's effort to improve the psychological development of students for them to have ethical, democratic, and effective behavior. Furthermore, they can contribute more to society and have high level of excitement to be a well-behaved person (McGrath, 2018). Creating the individual character is influenced by the environment (Lickona, 1994), which is both family and society; and the family is the initial place in educating someone's character (Patching, 2014). However, schools remain a place to provide good character stimulus to students (Sriwilujeng, 2017). Regulating education through character education will prepare students to face the challenges of the 21st century.

Indonesia is one of the countries which makes character education as they key point to make the citizens be ready to face the challenges in this century. Character education in Indonesia focuses on preparing an intelligent and superior society that is able to unite pluralism and a multicultural society (Najmina, 2018). Although character education in Indonesia has long been implemented, the strengthening of character education began to be felt since the 2013 curriculum change through the character education program (Sultoni, 2016). Currently, the Ministry of Education and Culture has established a character education formula called the Pancasila Student Profile. Pancasila Student Profile is a character that represents the way Indonesian people behave and act in accordance with the ideology of Pancasila (Asa, 2019). The Pancasila Student Profile is also a solution to the problem of character degradation that occurs among students due to foreign cultural acculturation. Thus, character based on Pancasila values is a solution in shaping the character of Indonesian society in facing the challenges of the 21st century.

The Pancasila Students Profile aims to form citizens who have a personality that can reflect Indonesian citizens and survival in the era of globalization (Sabon et al., 2022). The implementation of character education based on the Pancasila Student Profile in schools is carried out at school through formal and informal learning. In the implementation process, the Centre for Character Strengthening issued a frame of reference in the form of the Pancasila Students Profile dimensions. The dimensions of the Pancasila Students Profile include 6 aspects which are described as follows.

First, faith and fear of God. This contains religious values where this value can be a character foundation for the younger generation in facing the demands of the times (Astuti et al., 2020). Religion is a foundation of character in human life (Muhtar et al. 2019). The value of religiosity that a person believes will affect the ways and patterns of actions taken in everyday life. Religious values have an important power and have a strong social influence in social life (Emmons & Paloutzian, 2003). Indonesian students are expected to have noble morals that are manifested through good attitudes and behaviors towards themselves, others, and the environment as a reflection of their devotion to God Almighty and the manifestation of their beliefs (Pusat Penguatan Karakter, 2020).

The second is global diversity. 21st century education emphasizes producing global citizens who can take firm

responsibility in global challenges characterized by the uncertainty of time (Hartung, 2015). In education policy, globalization which is often also termed as the 21st century is related to intercultural understanding (Selter, P & Halbert, K., 2017). Global citizenship is further defined by Hartung (2015) as people who recognize themselves as democratic members of a global community that is not limited by the state. Indonesian students who are cultured, have a mature self-identity, can show themselves as a representation of the noble culture of their nation, while having a strong insight or understanding and openness to the existence of various regional, national, and global cultures (Kemdikbud, 2020).

The third is cooperative work. Cooperative work is defined as the ability to carry out activities together voluntarily so that activities can run smoothly, easily, and lightly (Mistiani et al., 2022). Cooperative work or *gotong royong* is a local wisdom that is the cultural heritage of the Indonesian people (Sibarani, 2018) which means cooperation to help each other in achieving common goals (Taylor & Aragon, 1991) by combining strength, potential, resources, and financing. Based on the two definitions expressed, cooperative work has similarities with cooperation and collaboration in 21st century skills.

The fourth is independence. Independence is one of the attitudes that has the initiative for self-development and its achievements based on the recognition of its strengths and limitations as well as the situation faced and is responsible for the process and results (Kemendikbud, 2020). Becoming more independent individuals that have self-confidence, and independence in doing their own tasks and responsibilities, respect time and have reliable skills in their duties (Gea, 2003). Independence can help individuals solve various problems they have without relying on others by relying on their knowledge, attitudes, and skills (Suryanti et al., 2022). Independence is one of the characteristics needed by society in facing the challenges of globalization.

The fifth is critical thinking. Critical thinking is one of the most discussed skills in education today. Indonesian students are expected to have the ability to process qualitative and quantitative information objectively, analyse information factually, evaluate information and conclude information and use it in decision making (Espey, 2017; Kemdikbud, 2020). Critical thinking skills involve reasoning and logic in decision making, problem solving, and inference (Fuad et al., 2017; Tiruneh et al. 2017; Akpur, 2020).

The last one is Creativity. The creativity within students will lead them to modify, reuse, and even create new ideas. In addition, learners can also view information from a different perspective (Rahardjanto, 2019). Creativity also presents the ability to create or provide unique ideas from alternative viewpoints (McGregor, 2007). Creative individuals can make connections or links between things that have never existed before and produce new (original) thoughts (Yusnaeni et al., 2017). Creativity is related to aspects of fluency, flexibility, originality, and elaboration (Tohir et al., 2018).

The six aspects of the Pancasila Student Profile dimension framed by the Indonesian Ministry of Education become a reference for educational institutions in developing programs and projects in character building to form a 21st century society. Character development does not just happen without environmental conditioning.

Character development is achieved through learning, training, habituation, and modelling (Pala, 2011). For this reason, the role of schools is expected to support the formation of 21st century character for students in a comprehensive and measurable manner.

Character measurement, especially the Pancasila Student Profile, is carried out by the Ministry of Education and Culture annually. However, measurement and evaluation are only carried out at certain levels recently. In addition, the available measuring instruments are also not owned by schools, so the evaluation materials are only sourced from the government. In addition, previous studies have developed scales to measure the character of the Pancasila Student Profile but only at the junior and senior high school levels (Sabon et al., 2022; Mistiani et al., 2022). No one has yet developed a Pancasila Student Profile assessment instrument specifically for secondary level primary schools (grades 3 and 4).

So far, teachers tend to conduct observations and interviews in measuring student character (Zuchdi et al., 2014). The self-assessment-based character instrument for elementary school that we developed specifically for the intermediate level can be used practically for schools to take measurements periodically, to see the progress of student character. The results of character measurement can be used as a reflection to see the success of the program developed by the school.

Based on the description above, this research was conducted with the aim of developing a self-assessment-based Pancasila Student Profile character assessment instrument for elementary schools. This instrument was developed based on the six dimensions of the Pancasila Student Profile that have been described previously. The instrument was developed scientifically and tested by validity and reliability estimation.

## Method

### Participants

We recruited grade 3 and 4 students from 16 primary schools in Soppeng Regency, South Sulawesi, to test the psychometric properties of the PSP scale. The selected schools were schools recommended by the Education Office, where the schools have implemented the latest curriculum in Indonesia that supports the Pancasila student profile character strengthening program. The questionnaire was completed by 697 students based on paper and pencil tests. Participation was anonymous, confidential, and voluntary. Students were given the freedom to decide whether to participate and fill out the questionnaire seriously.

### Instrument Development

The elementary school Pancasila Student Profile instrument was developed with the stages of developing affective instruments (Mardapi, 2018: 18; Azwar, 2019) (1) Determining instrument specifications consisting of determining objectives, studying relevant theories, determining indicators, and preparing grids; (2) writing instruments, where we make statements based on indicators; (3) Determining scoring guidelines, negative and

positive items are each coded to facilitate scoring, positive items are worth 1 = never, 2 = rarely, 3 = often, 4 = always, and vice versa for negative items; (4) reviewing the instrument, we involved 7 competent experts (2 psychology experts, 2 measurement experts, 3 education practitioners) were asked to assess the developed instrument which was then analyzed using Aiken's formula; (5) conducting trials, small-scale trials and wide-scale trials. Initially, we conducted a pilot test with 26 students in grades 3 and 4 in one school to see their understanding of the instrument items developed. If there were sentences that were difficult to understand because they were ambiguous, we revised them. Then we went to 16 schools to conduct a wide-scale trial so that 697 students filled in and returned the instrument; (6) analyzing the instrument, after scoring the instrument that had been filled in by students, we conducted a quantitative analysis to get proof of validity and reliability; (7) assembling the instrument, items that were proven valid and reliable were rearranged into a series of ready-to-use instruments.

### Data Analysis Procedure

Data analysis in this study used validity and reliability. Instrument validity was proven by content validity and construct validity. Content validity involved 7 experts and practitioners to evaluate the relevance of aspects, indicators, and the meaning and clarity of items on the initial 40-item developed. Each expert provided responses separately through a 4-point Likert scale form (1 = not relevant, 2 = somewhat relevant, 3 = moderately relevant, 4 = very relevant) to avoid neutral choices (Davis, 1992). We performed item revision and elimination based on Aiken's V value with a standard of 0.76 (Aiken, 1985). There were 5 items that had a validity index  $< 0.76$  so the items were eliminated from the instrument. Construct validity was proven through a pilot test of 697 grade 3 and grade 4 elementary school students.

The construct validity test was carried out using Confirmatory Factor Analysis (CFA). The CFA test is conducted to confirm the theory and confirm whether the indicator variables can confirm a factor (Hair et al., 2010; Ferdinand, 2014). Model fit criteria generally use 4 criteria namely (1) Model convergence and acceptable range of parameter estimates, (2) fit indices, (3) significance of parameter estimates and related diagnostics, and (4) measurement invariance across multiple samples (Netemeyer et al., 1996). However, in this study the criteria used are fit indices which are classified into absolute fit indices, comparative or incremental and parsimony. The analysis was carried out with the help of the windows version of the Lisrel application. The next analysis is the reliability test. Reliability is carried out with the aim of knowing the extent to which the measurement results of an instrument can be trusted (Ota et al., 2020). In other words, reliability shows the consistency of the scores obtained from the measurement results (Liu, Yin, & Wu, 2020). Hair et al (2010) explained that the reliability test in CFA analysis includes composite reliability (CR) and variance extracted (AVE). Hair et al (2010) state that CR values  $\geq 0.7$  include good reliability, while CR values between 0.6 and 0.7 include acceptable reliability, provided that the indicator has a factor load that matches the criteria. Internal consistency can also be measured using the Average Variance Extracted (AVE) estimate. The recommended AVE value is  $> 0.5$  (Hair et al, 2010).

## Results

### Instrument Validity

Instrument validity consists of content validity and construct validity. Construct validity was assessed by 7 experts by giving scores on several criteria such as 1) suitability of items for indicators and aspects, 2) instrument writing rules, 3) suitability of content and language selection for the target age of the instrument, 4) clarity of sentence use (unambiguous). Experts were given an assessment sheet in the form of a 4-points Likert scale. The results of expert evaluation were then analysed using Aiken's formula to obtain the validity index of each item (Retnawati, 2016; Azwar, 2014). The results are as follows.

Table 1. Distribution of aspects, indicators, items and V-Aiken

Aspects	Indicator	Item	Code	V-Aiken
Have faith and fear of God	Religious morals	I believe that everything on earth is created by God (favorable).	IT1	1.00
		I perform worship without any coercions from others (favorable).	IT2	0.95
	Personal morals	I have breakfast before going to school (favorable).	IT3	1.00
		I take a shower before going to school (favorable)	IT4	0.71
	Manners towards others	I visit friends who are in need (favorable)	IT5	0.76
		I make friends with anyone regardless of religion and ethnicity (favorable)	IT6	0.57
	Manners towards nature	I do not litter anywhere (unfavorable)	IT7	1.00
		I switch off the television after watching (unfavorable)	IT8	0.71
	Morals towards the Nation	I obey the class rules (favorable)	IT9	0.71
		I attend the flag ceremony on Monday (favorable)	IT10	0.95
Global diversity	Recognize and respect culture	I feel embarrassed when I speak Bahasa (unfavorable)	BG1	0.90
		I like listening to the folk songs (favorable)	BG2	1.00
	Intercultural communication and interaction	I find it difficult to talk to friends who go to a different school from me (unfavorable)	BG3	0.86
		I enjoy learning the local language of other ethnic groups (favorable)	BG4	0.86
	Reflection and responsibility towards the experience of diversity	I feel uncomfortable playing with friends who come from a different ethnicity to me (unfavorable)	BG5	0.95
		I feel that learning about other cultures will destroy our culture (unfavorable)	BG6	0.95
	Social justice	I feel sad when a friend is marginalized in class (favorable)	BG7	0.71

		I vote for the class leader if there is an election (favorable)	BG8	1.00
Cooperative Work	Collaboration	I am involved in completing group tasks (favorable)	GR1	0.81
		I prefer to do group work by myself (unfavorable)	GR2	0.95
	Concern	I join my friends cleaning the class (favorable)	GR3	0.95
		I donate to the natural disaster victims (favorable)	GR4	0.86
	Sharing	I never lend my pencil to my friends (unfavorable)	GR5	0.90
		I never share my meals with my friends (unfavorable)	GR6	0.86
Independency	Self-understanding	I cannot do my homework independently (unfavorable)	MD1	0.86
		I re-learn the difficult lessons at home (favorable)	MD2	0.90
	Self-regulation	I am easily angry when I get bullied by friends in class (unfavorable)	MD3	0.95
		I am late in completing assignments (unfavorable)	MD4	1.00
Critical thinking	Acquire and process information	I ask the teachers when I do not understand the lessons (favorable)	KT1	0.95
		I use one source only to finish the assignment (unfavorable)	KT2	0.95
	Analyze and evaluate reasoning	I look for the easiest way to complete the task (favorable)	KT3	0.90
		I do my assignments in a hurry (unfavorable)	KT4	1.00
	Reflecting on one's own thinking	I have expressed my opinion correctly (favorable)	KT5	0.86
		I think repeatedly before deciding something (favorable)	KT6	0.90
Creativity	Generate original ideas	I struggle when asked to express my opinion (unfavorable)	KR1	0.90
		express my different opinions in class (favorable)	KR2	1.00
	Produce original work	I create my assignment with my own ideas (favorable)	KR3	0.95
		I do my art assignments exactly the same as the examples given (unfavorable)	KR4	0.86
	Having flexible thinking	I can only copy the example given by the teacher (unfavorable)	KR5	0.95
		When given a free drawing assignment, I make it according to what is in my mind (favorable)	KR6	0.86

Based on the table above, the Aiken validity index score is in the range of 0.57 - 1.00. According to Aiken (1985), the cut off value for 7 raters with a 4-choice scale is 0.76. So that at this stage there are 5 items that are eliminated, namely IT4, IT6, IT8, IT9 and BG7. At this stage it became the first instrument reduction process with 35 items that were content valid.



The next stage is content validity with CFA using the windows version of Lisrel 8.8. We tested 35 items on 697 students in grades 3 and 4 for further item reduction. The initial CFA results on the Pancasila Student Profile character instrument are presented in table 2. Table 2 shows that in general the model is still not fit. The predetermined fit parameter values are still not met such as NFI, IFI, CFI, TLI, AGFI. The Pancasila Student Profile instrument model and loading factor values can be seen in Figure 1.

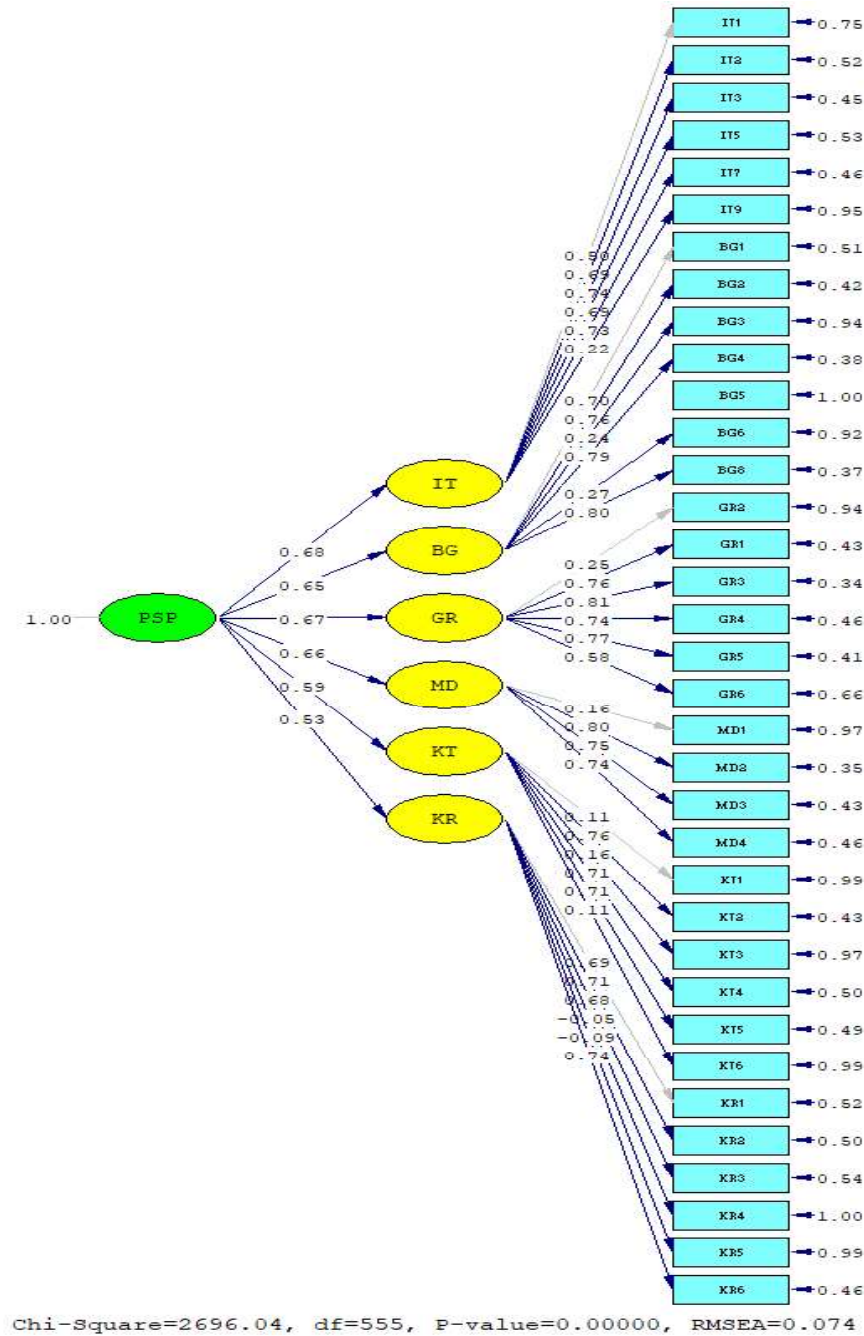


Figure 1. Initial measurement model of pancasila student profile instrument



Table 2. Evaluation of model fit of cfa first model

Category	Fit Parameters	Output	Criteria	Result
Absolute fit	Chi-Square	2696.04	$\geq 0.05$	Fit
	Goodness of fit index (GFI)	0.9	$\geq 0.9$	Fit
	Root mean square error of approximation (RMSEA)	0.074	$\leq 0.05$	Less Fit
Incremental fit	Normed fit index (NFI)	0.81	$\geq 0.9$	Not Fit
	Incremental Fit Index (IFI)	0.88	$\geq 0.9$	Not Fit
	Comparative Fit Index (CFI)	0.88	$\geq 0.9$	Not Fit
	Tucker-Lewis Index (TLI)	0.80	$\geq 0.9$	Not Fit
	Adjusted Goodness Fit of Index (AGFI)	0.88	$\geq 0.9$	Not Fit
Parsimonius fit	Parsimonius Normal Fit Index (PNFI)	0.75	0.6 – 0.9	Fit

Because the model does not yet fit, we modified the model to get a better model. Model modification is done by eliminating items that have a loading factor value  $< 0.5$ . The loading factor weight used as the basis in this study was  $\geq 0.5$  (Hair et al, 2010). In Figure 1, there are 11 items that have a loading factor value below 0.5 so they are eliminated at this stage. These items are IT1, IT10, BG3, BG6, GR2, MD1, KT1, KT3, KT6, KR4, and KR6. Thus, the CFA test for the final model did not include these 11 items. The fit model parameters after 11 items are removed can be seen in table 3 and figure 2.

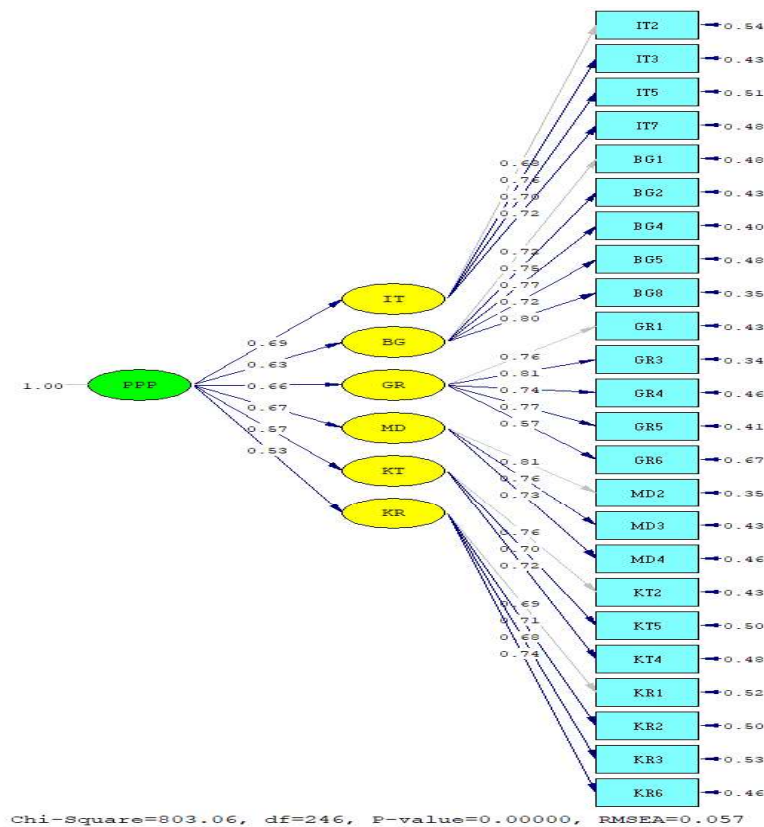


Figure 2. Final measurement model of pancasila student profile instrument

Table 3. Evaluation of model fit of final stage cfa results

Category	Fit Parameters	Output	Criteria	Result
Absolute fit	Chi-Square	803.06	$\geq 0.05$	Fit
	Goodness of fit index (GFI)	0.95	$\geq 0.9$	Fit
	Root mean square error of approximation (RMSEA)	0.057	$\leq 0.05$	Fit
Incremental fit	Normed fit index (NFI)	0.93	$\geq 0.9$	Fit
	Incremental Fit Index (IFI)	0.97	$\geq 0.9$	Fit
	Comparative Fit Index (CFI)	0.97	$\geq 0.9$	Fit
	Tucker-Lewis Index (TLI)	0.92	$\geq 0.9$	Fit
	Adjusted Goodness Fit of Index (AGFI)	0.94	$\geq 0.9$	Fit
Parsimonius fit	Parsimonius Normal Fit Index (PNFI)	0.83	0.6 – 0.9	Fit

Table 2 shows the results of the CFA test after modifying the reduction of several items. In the final model, the Chi-square p value is above 0.05, which means that there is no significant difference between the ideal model and the proposed model. The values in the Incremental fit category such as NFI, IFI, CFI, TLI, AGFI have also changed for the better so that they are in accordance with the fit model. Thus, the proposed model fits the empirical data. The complete model and factor loadings can be seen in Figure 2.

### Instrument Reliability

After the validity test is carried out, the reliability test is then carried out. Reliability is the internal consistency of an instrument that can be measured based on the level of item homogeneity. We use CFA results to support the evidence of reliability with construct reliability (CR) and variance extracted (VE). The reference for instrument reliability is if the CR value from the calculation is  $\geq 0.60$  and the AVE value from the calculation is  $\geq 0.40$  (Wijanto, 2015: 76; Hair et al., 2010: 125). Another opinion used as a reference in this study is Huang (2017: 186) that a CR value of 0.63 is considered good and an acceptable VE value ranges between 0.30 and 0.66 (Huang et al., 2017).

Table 4. Construct reliability results with composite reliability (CR) and variance extracted (VE)

Aspects	CR	VE	Result
Have faith and devotion to God Almighty and have noble character (IT)	0,70	0,38	Reliable
Global diversity (GD)	0,84	0,45	Reliable
Cooperative Work (GR)	0,83	0,45	Reliable
Independence (IN)	0,75	0,50	Reliable
Critical Thinking (CT)	0,62	0,35	Reliable
Creativity (CR)	0,74	0,41	Reliable

Based on the table above, the Composite Reliability (CR) and Variance Extracted (VE) coefficient values for the

aspects of faith and devotion to God Almighty and noble character are 0.70 and 0.38, which means reliable. The Composite Reliability (CR) and Variance Extracted (VE) values for aspects of global diversity are 0.84 and 0.45, which means reliable. The Composite Reliability (CR) and Variance Extracted (VE) values for the gotong royong (cooperative work) aspect are 0.83 and 0.45 which means reliable. The Composite Reliability (CR) and Variance Extracted (VE) values of the independent aspect are 0.75 and 0.5 which means reliable. The Composite Reliability (CR) and Variance Extracted (VE) values of the critical reasoning aspect are 0.62 and 0.35 which means reliable. The value of Composite Reliability (CR) and Variance Extracted (VE) of the creative aspect is 0.74 and 0.41 which means reliable. Thus, the developed Pancasila student profile character assessment instrument can be said to be reliable so that it has a good level of reliability.

## Discussion

This study aimed to develop and validate a comprehensive scale for measuring Pancasila Student Profile (PSP) based on the theoretical framework of Indonesian Ministry of Education and Culture. The instrument development process has gone through several reduction processes which were originally 40 items. The developed Pancasila Student Profile instrument consists of 6 aspects which are translated into 19 indicators and 24 items. This instrument can be used to measure student character because it has been proven valid and reliable. An instrument is said to be of good quality if it meets the criteria of validity, reliability, and practicality (Gronlund and Linn, 1990). If an instrument has not met the criteria of validity and reliability, the data obtained cannot be trusted and will affect the conclusions (Kerlinger, 2006). The instrument validation process with content validation testing, obtained valid evidence that 35 items meet the desired criteria. The results of the analysis using Aiken's V formula showed that the validity index was in the range of 0.51 - 1.00. 5 items were eliminated because they did not meet the cut score of 0.76, so the 35 surviving items will be tested at a later stage.

The results of construct validation as evidenced by the CFA test show that the proposed model fits the empirical data after codification. Initially, 35 items were analyzed using CFA to see the suitability of the model, but because there were still some criteria that did not fit, modifications were made by discarding items that had a loading factor value  $<0.5$ . This reduced the valid instrument to 24 items which were retested with CFA resulting in a better measurement model. NFI, IFI, CFI, TLI, AGFI, which were initially not fit, have now increased after model modification so that they meet the fit indices criteria. Not only that, other criteria such as Chi-square, GFI, RMSEA and PNFI also look better after model modification. The results of instrument reduction at the CFA stage are reviewed based on each aspect. The findings on the first aspect, namely faith and fear of God, are measured by 4 valid and reliable items. The 5 indicators developed at the beginning have been reduced to 4 indicators. This happened because two items on the indicator "state morals" were eliminated during the validation process. As explained by Muhtar et al. (2019) that belief and piety to God can be manifested through polite behavior, cleanliness, tolerance, and concern towards the environment. So that the fulfilment of other indicators can form citizens who have good state morals.

The findings on the second aspect, global diversity, the items that remained valid and reliable which is 5 items. At the beginning of the development there were 7 items, 2 items were cancelled during the validation process, but all indicators are represented by items that measure this aspect. Several items that survive can measure aspects of global diversity, namely students who can love their ancestral culture, locality, and identity but can still think openly and accept differences through intercultural interactions (Jamaludin et al., 2022). The findings on the third aspect, cooperative work, the initial developed items were 6 items then reduced to 5 items. In this aspect, only 1 item was eliminated. The three valid items should reflect the value of gotong royong (cooperative work), which is a local wisdom of the Indonesian nation that generally means cooperation (Sibrani, 2018) to achieve common goals as social beings (Kurniawati & Mawardi, 2021). In the fourth aspect, independence, there are 3 valid and reliable items out of 4 originally developed items. Independence in the Pancasila Student Profile means that students do not always depend on others in making choices and completing their responsibilities (Kluwer et al., 2020). In the fifth aspect, critical thinking, the 6 items developed at the beginning were reduced to 3 items. However, the three items measure each indicator so that the indicators are still represented. This aspect was also observed to have the lowest validity and reliability compared to the others. In some studies, critical thinking is measured using cognitive tests, but because it is related to character, this study uses a Likert scale. Critical thinking in the Pancasila Student Profile means that students can make decisions on the consideration of existing facts by thinking fairly (Kemendikbud, 2022). The sixth aspect, creativity, has 4 items that are proven valid and reliable. There were 2 items that were cancelled during the validation process because initially the proposed 6 items. The four items describe the ability of students who can reuse, modify, and even create new and original ideas (Rahardjanto, 2019).

The last test conducted was reliability estimation as evidenced by composite reliability and variance extracted scores. The results show that all six aspects fulfil reliability with CV and VE values above 0.63 and 0.3. Composite reliability indicates internal consistency and homogeneous variance between measurement items (Whidhiharso, 2016), so that even though the sentence items are different, they still measure the same construct (Huck, 2007). Thus, it can be concluded that the Pancasila Student Profile Instrument to measure 21st century character is valid and reliable based on the instrument construction that has been carried out. This instrument can be used at the intermediate level in primary schools.

## Conclusion

In conclusion, the construct of the Pancasila Student Profile instrument to measure student character in the 21st century is psychometrically valid and reliable. The 24-item Pancasila Student Profile instrument consists of six aspects, namely faith and devotion to God Almighty and noble character, global diversity, cooperative work, independence, critical reasoning, and creativity. The six aspects were developed into 19 indicators resulting in 24 items. The validity of the instrument is proven by construct validity through model fit test and evaluation of model fit criteria. The reliability of the instrument has also been proven to be good based on composite

reliability and variance extracted analyses. To our knowledge, this is the first instrument to measure the character of the Pancasila Student Profile specifically made for grades 3 and 4 in elementary school. The measurement results using this instrument can later be used as preliminary data in comparing the character scores of students at other levels in Indonesia.

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## References

- Aiken, L. R. (1985). Three coefficients for analyzing the reliability and validity of ratings. *Educational and Psychological Measurement*, 45(1), 131–142. <https://doi.org/10.1177/0013164485451012>
- Akpur, U. (2020). Critical, reflective, creative thinking and their reflections on academic achievement. *Thinking Skills and Creativity*, 37(x), 1-23. <https://doi.org/10.1016/j.tsc.2020.100683>.
- Allen, K., & Bull, A. (2018). *Following Policy: A Network Ethnography of the UK Character Education Policy Community*. *Sociological Research Online*, 23(2), 438–458. doi:10.1177/1360780418769678
- Asa, A. I. (2019). Pendidikan karakter menurut Ki Hadjar Dewantara dan Driyarkara. *Jurnal Pendidikan Karakter*, 10(2), 245-258. <https://journal.uny.ac.id/index.php/jpka/article/view/25361>.
- Astuti, D. P., Handoyo, S. R., & Sukardi, A. (2020). Pengembangan Model Pendidikan Karakter Berbasis Budaya Lokal. *Jurnal Pendidikan Karakter*, 10(2), 136-145. <https://doi.org/10.21831/jpk.v10i2.31015>.
- Azwar, S. (2010). *Penyusunan skala psikologi*. Yogyakarta: Pustaka Pelajar.
- Davis, F. D. (1992). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319-340. <https://doi.org/10.2307/249008>.
- Emmons, R. A., & Paloutzian, R. F. (2003). The psychology of religion. *Annual Review of Psychology*, 54(1), 377–402. <https://doi.org/10.1146/annurev.psych.54.101601.145024>.
- Espey, M. (2017). Enhancing critical thinking using team-based learning. *Higher Education Research & Development*, 37(1), 15–29. <https://doi.org/10.1080/07294360.2017.1344196>.
- Fuad, N.M., Zubaidah, Siti., Mahanal, Susriyati., Suarsini, Endang. (2017). Improving junior high schools' critical thinking skills based on test three different models of learning. *International Journal of Instruction*, 10(1), 101-113. <https://doi.org/10.12973/iji.2017.1017a>.
- Gea, Antonius Atosokhi. (2003). *Character building 1: relasi dengan diri sendiri*. Jakarte: Jakarta Elex Media Komutindo.
- Gronlund, N. E., & Linn, R. L. (1990). *Measurement and evaluation in teaching*. McMillan Company.
- Hair JR., J. F., B lack, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate Data Analysis* (Seventh ed.). Pearson Prentice Hall.

- Hartung, C. (2015). *Global citizenship incorporated: competing responsibilities in the education of global citizens. Discourse: Studies in the Cultural Politics of Education*, 38(1), 16–29. DOI: <https://doi.org/10.1080/01596306.2015.1104849>.
- Huang, N., Chang, Y., & Chou, C. (2020). Effects of creative thinking, psychomotor skills, and creative self-efficacy on engineering design creativity. *Thinking Skills and Creativity*, 37(2), 1–10. <https://doi.org/10.1016/j.tsc.2020.100695>.
- Huck, S. W. (2007). *Reading statistics and research*. Allyn & Bacon.
- Jamaludin., Alanur, Shofia Nurun., Amus, Sunarto., Hasdin. (2022). Penerapan nilai profil pelajar pancasila melalui kegiatan kampus mengajar di sekolah dasar. *Jurnal Cakrawala Pendas*, 8(3), 698-709. <http://dx.doi.org/10.31949/jcp.v8i2.2553>.
- Jose, Kshema. (2021). Conversations through Web 2.0 tools: Nurturing 21st century Values in the ESL Classroom. *Rupkatha Journal on Interdisciplinary Studies in Humanities*, 13(2), 1-16. <https://dx.doi.org/10.21659/rupkatha.v13n2.35>
- Kerlinger. (2006). *Asas-asas penelitian behaviour* [Principles of research behavior] (3rd ed.). Gadjah Mada University Press.
- Kluwer, E. S., Karremans, J. C., Riedijk, L., & Knee, C. R. (2020). Autonomy in Relatedness : How Need Fulfillment Interacts in Close Relationships. *Personality and Social Psychology Bulletin*, 46(4), 603–616. <https://doi.org/10.1177/0146167219867964>.
- Kurniawati, Dian., Mawardi. (2021). Pengembangan instrumen penilaian sikap gotong royong dalam pembelajaran tematik di sekolah dasar. *Edukatif: Jurnal Ilmu Pendidikan*, 3(3), 640-648. <https://doi.org/10.31004/edukatif.v3i3.387>.
- Lickona, T. (1994). *Educating for Character*. London : Allyn and Bacon.
- Lovat, Terence. (2017). Values education as good practice pedagogy: Evidence from Australian empirical research. *Journal of Moral Education*, 46 (1), 88– 96. doi: 10.1080/03057240.2016.1268110
- McGrath, E. R. (2018). What is Character Education. *Journal Character Education*, 14, 23–35.
- McGregor, D. (2007). *Developing thinking; developing learning*. McGraw-Hill Education
- Ministry of Education and Culture. (2020). *Study on the Development of Pancasila Student Profile*. Research and Development and Bookkeeping Agency.
- Mistiani, W., Istiyono, E., & Syamsudin, A. (2022). Construction of the character assessment instrument for 21st century students in high schools. *European Journal of Educational Research*, 11(2), 935-947. <https://doi.org/10.12973/eu-jer.11.2.935>.
- Muhtar, Tatang., Supriyadi, Tedi., Lengkana, Andi Setia., Hanifah, Siti. (2019). Religious Characters-Based Physical Education Learning in Elementary School. *International Journal of Learning, Teaching and Educational Research*, 18(12), 211-239. <https://doi.org/10.26803/ijlter.18.12.13>.
- Netemeyer, Richard G., Boles, James S., & McMurrian, Robert. (1996). Development and validation of work-family conflict and family-work conflict scales. *Journal of Applied Psychology*. 81(4), 400- 410. <https://doi.org/10.1037/0021-9010.81.4.400>.
- Pala, A. (2011). The need for character education. *International Journal of Social Sciences and Humanity Studies*, 3(2), 23–32. <https://dergipark.org.tr/en/pub/ijsshs/issue/26222/276136>.



- Rahardjanto, A., Husamah, & Fauzi, A. (2019). Hybrid-PjBL: Learning Outcomes, Creative Thinking Skills, and Learning Motivation of Preservice Teacher. *International Journal of Instruction*, 12(2), 179-192. <https://doi.org/10.29333/iji.2019.12212a>.
- Retnawati, H. (2016). Proving content validity of self-regulated learning scale (The comparison of Aiken index and expanded gregory index). *Research and Evaluation in Education*, 2(2), 155–164. <https://doi.org/http://dx.doi.org/10.21831/reid.v2i2.11029>
- Salter, P., & Halbert, K. (2017). Constructing the [parochial] global citizen. *Globalisation, Societies and Education*, 15(5), 694–705. <https://doi.org/10.1080/14767724.2016.1264290>.
- Sabon, Y., Istiyono, E., & Widiastuti, W. (2022). Developing "Pancasila Student Profile" instrument for selfassessment. *Jurnal Penelitian dan Evaluasi Pendidikan*, 26(1), 37-46. doi:<https://doi.org/10.21831/pep.v26i1.45144>
- Sibarani, R. (2018). Batak Toba society's local wisdom of mutual cooperation in Toba Lake area: a linguistic anthropology study. *International Journal of Human Rights in Healthcare*, 11(1), pp. 40-55. <https://doi.org/10.1108/IJHRH-08-2017-0035>.
- Sriwilujeng, D. (2017). Panduan Implementasi Penguatan Pendidikan Karakter. Jakarta: Erlangga.
- Sultoni, Achmad. (2016). Pendidikan Karakter dan Kemajuan Negara; Studi Perbandingan Lintas Negara. *JOIES (Journal of Islamic Education Studies)*, 1(1), 185-206. <https://doi.org/10.15642/joies.2016.1.1.167-188>.
- Suryanti, H. H. S., Hartini, S., Utami, F. P. (2022). Student independence in overcoming the impact of covid-19: classical online guidance based on character values. *Cakrawala Pendidikan: Jurnal Ilmiah Pendidikan*, 41(1), 71-82. <https://doi.org/10.21831/cp.v41i1.43943>.
- Taylor, Nick. (2018). *The Return of Character: Parallels Between Late-Victorian and Twenty-First Century Discourses*. *Sociological Research Online*, 23(2), 399–415. <https://doi.org/10.1177/136078041876967>.
- Tiruneh, D.T., Cock, M.D., Weldeslassie, A.G., Elen, Jan., Janssen, Rianne. (2017). Measuring critical thinking in physics: development and validation of a critical thinking test in electricity and magnetism. *International Journal of Science and Mathematics Education*, 15(4), 663-682. <https://doi.org/10.1007/s10763-016-9723-0>
- Tohir, M., Abidin, Z., Dafik., Hobri. (2018). Students creative thinking skills in solving two dimensional arithmetic series through researchbased learning. *Journal of Physics*, 1008(1), 1-11. <https://doi.org/10.1088/1742-6596/1008/1/012072>.
- Widhiarso, Wahyu. (2009). Koefisien reliabilitas pada pengukuran kepribadian yang bersifat multidimensi. *Psikobuana*.No.1, Vol.1.Hal. 39-48.
- Wijanto, S. H. (2015). A note on the coefficient of composite reliability. *Journal of Applied Psychology*, 100(4), 1214-1223. <https://doi.org/10.1037/a0038884>.
- World Economic Forum. (2015). New Vision for Education: Unlocking the Potential of Technology. Retrieved from [http://www3.weforum.org/docs/WEFUSA\\_NewVisionforEducation\\_Report2015.pdf](http://www3.weforum.org/docs/WEFUSA_NewVisionforEducation_Report2015.pdf)
- Wynne, E. A. (1991). Character and Academics in The Elementary School. Benninga J.S. (Penyunting). Moral, character, and civic education in the elementary school. New York: Teachers College, Columbia University.



- Yusnaeni, Corebima, A. D., Susilo, H. & Zubaidah, S. (2017). Creative Thinking of Low Academic Student Undergoing Search Solve Create and Share Learning Integrated with Metacognitive Strategy. *International Journal of Instruction*, 10(2), 245-262. <https://doi.org/10.12973/iji.2017.10216a>
- Zuchdi, D., Ghufro, A., Syamsi, K., & Masruri, M. S. (2014). Pemetaan implementasi pendidikan karakter di SD, SMP, dan SMA di Kota Yogyakarta. *Jurnal Pendidikan Karakter*, 5(1), 1-10. <https://journal.uny.ac.id/index.php/jpka/article/view/2172>.